Study of Supernova at Very High Energy with HAWC

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Study of Supernova Remnants as Cosmic Ray Accelerators

- Interests: Origin of cosmic rays and the study of particles in the high energy realm.
- Objective: study of supernova remnants and pulsars with nebulae as particle accelerators.
- HAWC recently obtained the the sensitivity required to study SNRs in the TeV energy range.
- Research questions:
  - Are the gamma-rays emitted of hadronic (π^0 decay) or leptonic (synchrotron, bremsstrahlung, inverse Compton scattering) processes? Are there agreements as to the mechanism of gamma rays based on multiwavelength observations?
  - At what evolutionary stage of a SNR particle acceleration most efficient? That is, at the adiabatic phase or the radiative phase?